



# NPS – Needs & Issues

(and boy do we have them)

# My Job today...

- ⇒ I want to throw out some monitoring issues that NPS Programs need to begin to address. These will be generalizations of the conditions in the Region. For too long we have ignored the monitoring/evaluating aspect of our program.



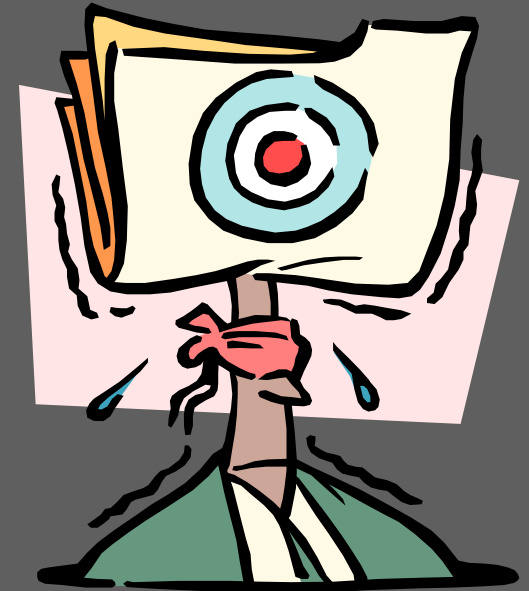


# Questions for NPS Managers...

- ⇒ Where are the NPS problems within the state?
- ⇒ How should we be prioritizing our grant applications?
- ⇒ What does the data that monitoring programs collect mean to the NPS program?
- ⇒ How can we better access BMP's?
- ⇒ How can we better evaluate our program?

# Why now?

- ⇒ FFY2004 Guidance, a need for program/project evaluation
- ⇒ Targeting, prioritizing and selecting projects



# Monitoring Gaps...

## (for a NPS Program)

- ⇒ Where are NPS pollution problems in the state?
  - Hard to identify areas of the state that should be targeted by the NPS Program. Most monitoring programs focus on biology & chemical data. Suspended sediment data available generally but rarely storm event or continuous monitoring.
- ⇒ No monitoring data available
  - Most of the waterbodies that are part of the NPS Program are smaller waterbodies, therefore less likely to be included in monitoring programs.

# Monitoring Gaps...

## (for a NPS Program)

### ⇒ Poor monitoring design

- The NPS Program managers need to work with the Monitoring managers to set up proper monitoring design for NPS monitoring.
  - IEPA, a total of two references concerning NPS monitoring in their recent Monitoring Strategy Report.



## To be considered when thinking of monitoring design...

Effectiveness of Monitoring Design	When Monitoring Occurs	Questions Being Answered	Supports Adaptive Management
Postdesign	When the management effort has been completed	What is the condition after the management effort has been completed	NA
Pre- and postdesign	Before and after management effort	What is the change in condition before and after management activity?	NA
Pre- and postdesign w/multiple samples in between	Before, during, and after management	What is the change in condition and direction of trend in water quality?	Yes
Pre- and post design with control group	Before and after for matched or paired watersheds	What is the change in condition, and is there a correlation with management?	Yes
Comprehensive design	Multiple before, during, and after in various designs with controls and match/paired watersheds	What is the change in condition, and did the proposed management activities cause it?	Yes

# Monitoring Gaps...

## (for a NPS Program)

### ⇒ Wrong parameters collected

- e.g. working on a chloride “cause” but no chloride data collected.

### ⇒ Insufficient monitoring (frequency)

- Continuous?
- Weekly?
- Monthly?
- Quarterly?
- Yearly?
- This would part of the monitoring design that is completed upfront of any watershed management.



# Monitoring Gaps... (for a NPS Program)

## ➡ Data availability

- Often data is “out there” but not available for use by the NPS Program.
  - Data doesn’t get put in STORET...
  - Data doesn’t go through the proper QA/QC to be usable
  - No database, only hard copies of water quality results
  - Many times the best data is in the biologist head!



# Monitoring Gaps... (for a NPS Program)

⇒ No explanatory data collected

- Precipitation

- Current, previous 48 hours and before if relevant

- Temperature

- Cloud Cover

- Wind Direction/Speed

- Land Use

- Soils & Topography



# Monitoring Gaps...

## (for a NPS Program)

### ⇒ Wrong monitoring site

- Upstream to the BMP implementation?
- Too far downstream?
- Issue to be discussed when setting up the monitoring design

### ⇒ No watershed wide monitoring

- HELP



# Evaluation

➡ The FFY 2004 guidance for 319 Grants will mandate evaluation for, at a minimum, some of our projects, individual BMPs and overall an programmatic evaluation.

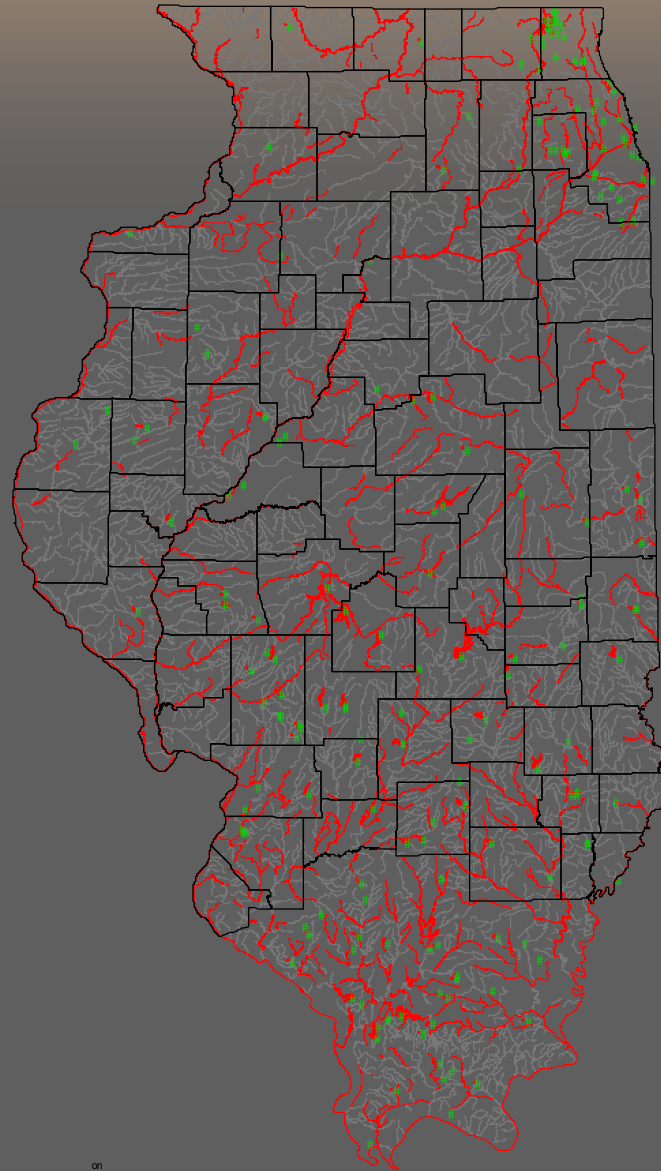
- For this we will need the help of the monitoring programs!



# Evaluation

## ⇒ Statewide

- We need to start evaluating our overall NPS Programs. We will need to have a good overview of water quality throughout the state to accomplish this goal. This will also help in selecting/prioritizing projects.



# Evaluation

## ⇒ Project-wide

- This should include pre & post monitoring as well as during implementation monitoring. Not only should monitoring occur but should be immediately evaluated to determine if the implementation activities should be re-addressed.





# Evaluation

- ➔ Individual BMPs need to have monitoring completed as well. We need to determine BMP efficiency for future use and for site specific use.



# Ideas to move forward...

## ⇒ Monitoring Design

- For a complete evaluation of a project a monitoring program needs to be designed so that monitoring can begin prior to any watershed management work commences.
- If only post monitoring is to be completed a design still needs to be completed so that the monitoring is both cost and time effective.



# Ideas to move forward...

- ⇒ Particularly for long monitoring projects **Volunteer Monitors** need to be used. They will need proper training and complete QA/QC so that the data they collect will be meaningful.



# Ideas to move forward...

## ➡ Education

- We need to educate the citizens of the watershed that we are working on improving. We need their by-in for a successful project. This doesn't include just project description but showing citizens the data and involving them in data collection. Also showing citizens how their actions can help or hurt water quality.



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⇒ Where will all the money come from to further NPS monitoring????  
The \$10,000 question!





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- ⇒ NPS Programs need to understand the ramifications of NOT monitoring.
- ⇒ NPS Programs need to work more closely with QA/QC staff to answer QAPP issues.
- ⇒ NPS Programs need to be given more leeway to incorporate monitoring into their programs.

# Next Step...

- ➡ It has been proposed that in the not too distant future that the Monitoring Programs and the NPS Programs meet and together discuss the issues brought forth today.
- ➡ Region V has proposed this meeting and suggests that there is money in the budget for such a meeting (!!!!)